REMARKS

Reconsideration and allowance for the above-identified application are respectfully requested in light of the above amendments and these remarks. Claims 1-22 were pending at the time of the last examination. Claims 1, 2, 12 and 13 are amended herein. Accordingly, Claims 1-22, as further amended, are pending for further consideration.

Section 1 of the Office Action rejected Claims 1 and 12 under 35 U.S.C. 102(e) as being anticipated by United States patent number 6,438,362 issued to Amezawa (hereinafter referred to simply as "Amezawa"). As recited in Claims 12 and 13 (as amended) recite that "propagation path variations [are estimated] from different transmit power control sections in the past to a certain present transmit power control section". This recited feature is supported by, for example, Figure 4 of the specification and the corresponding description. An example of the estimation as recited in Claims 1 and 12 is graphically presented immediately below as follows:

(Estimation of the present invention)

1st estimation past < ---------- > present (#n-K - > #n slot)

...

2nd estimation past < ---------- > present (#n-2 - > #n slot)

3rd estimation past < ------ > present (#n-1 - > #n slot)

---------- > time

After the estimation, "at least one of vector, amplitude and/or power of a received signal of [the] transmit power control sections [is multiplied] by the propagation path variation estimation value". Then, "at least one of the [corrected] vector, amplitude and/or power of [the] received signal of [the] transmit power control sections [is then averaged]". Also, an averaging

section (i.e., a time period of K slots) is changed according to power assigned to a signal to be measured.

The present invention is different from the scheme of Amezawa '362 in time periods of sections for estimation. In the case of the present invention, the estimation is carried out from different transmit power control sections in the past to a certain present transmit power control section. On the contrary, an estimator of Amezawa '362 obtains the estimated value using a moving-averages method, in which an averaging is executed over a predetermined number of the latest data in the pilot signal input to the estimator, one after another (column 3, lines 32 - 35). Therefore, the present time changes each time the estimation is conducted. A graphical representation of how estimation is accomplished in Amezawa is now shown immediately below and contrast sharply with the graphical represented represented above for Claims 1 and 12.

1st estimation past < ---------- > present

...

2nd estimation past < ---------- > present

3rd estimation past < ------ > present

---------- > time

Sections 2-14 of the Office Action rejected Claims 2, 13 under a variety of 35 U.S.C. 103(a) rejections as being unpatentable over either Amezawa in view of one or more other references (i.e., **Sawahashi, Ling, Kitade, Kubo** and **well known arts**) or over Vasic in view of one or more other references (i.e., **Shiraki, Sawahashi** and **Dohi**).

As discussed above with respect to the 35 U.S.C. 102(e) rejections, Amezawa does not disclose the calculation of differences of propagation estimation values between different times in the past and the certain time. (i.e. changing amounts during the time periods) and multiplying

these changing amounts. Similarly, none of the Sawahashi, Ling, Kitade, Kubo and the alleged well known arts inherency disclose this feature. Accordingly, those claims that depend from Claims 1 and 12 are not rendered unpatentable over Amezawa in view of any of the other cited art.

In Vasic, an estimation circuit receives and rotates a data symbol train and a corresponding receiving signal to produce a rotated output, and the output is divided into groups. A signal power and an interference power are measured by using pilot symbols received during a 1 pilot symbol period of M samples which are averaged (column 7, lines 6-8). That is, averaging of Vasic '194 is carried out in a time period of 1 pilot signal and it is different from that of the invention of Claims 2 and 13.

Shiraki '296 discloses controlling transmission power of a mobile terminal based on received power of a signal transmitted from the mobile terminal. A mobile terminal estimates the Doppler frequency that the received signals is subject to under fading, based on the transmission power control instruction signal transmitted by the base station and a current rate of modification in the transmission power. The mobile terminal controls the transmission power of a signal to be transmitted, based on the transmission power control instruction signal transmitted and the changed rate.

Shiraki estimates Doppler frequency at a certain time but it does not estimate a variation from different transmit power control sections in the past to a certain present.

(Estimation of Shiraki '296)

1st estimation Doppler frequency

...

2nd estimation Doppler frequency

3rd estimation Doppler frequency

---------- > time

Sawahashi discloses a CDMA system which controls transmission power by using a closed loop control and an open loop control. The scheme of this reference measures an average of a received power per transmission power control period. Ling discloses estimation by correlating an input data vector with a set of mutually orthogonal codes to generate a set of output values. The input data consists of data samples of a recieved orthogonal coded signal. Dohi discloses a CDMA communication system in which transmission power of own station is determined in accordance with a suggestion by a transmission power control bit.

However, these references fail to disclose the estimation of a propagation path variation and a transmit power changing amount from different transmit power control sections in the past to a certain present transmit power control section as in the present invention.

Kitade discloses that the mobile station compares a SIR measurement result with a reference SIR and generates a transmission power control bit based on the result of the comparison. This transmission power control bit is embedded as transmission power control data on an uplink and transmitted. However, it does not disclose that the averaging section (i.e. the number of slots) is not changed as in the present invention of Claim 9.

Kubo discloses an speed estimation apparatus detecting a change of a transmission power control command transmitted from a receiving station and estimating the moving speed of the receiving station in mobile communication of a spread spectrum system.

However, this reference fail to disclose the estimation of a propagation path variation and a transmit power changing amount from different transmit power control sections in the past to a certain present transmit power control section as in the present invention.

In our claim amendment, Claims 1, 2, 12 and 13 are changed to clarify the above discussed feature of the invention. Accordingly, the 35 U.S.C. 103(a) rejections should be withdrawn. Accordingly, favorable action is respectfully requested.

In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney.

Dated this 27th day of April, 2004.

Respectfully submitted,

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